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AUTHOR Birch, Elisa-Rose; Kenyon, Peter; Koshy, Paul; Wills-Johnson, Nick

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ABSTRACT

The social and economic impacts of adult and community education (ACE) in Australia were examined in an exploratory study. A provider survey that was sent to approximately 1,900 ACE providers elicited 315 responses (response rate, approximately 17%), and a student survey that was sent to 4,000 ACE students generated 400 responses (response rate, 10%). Six student focus groups were also held. The study established that, although non vocational education and training (non-VET) ACE still accounts for most ACE provision, the sector has been characterized by increasing provision of VET and an increasing role as a "transition platform" into formal VET or higher education. Although categorization of adult learning experiences into non-VET ACE versus VET ACE was convenient (or necessary) for education and training policymakers and statisticians, the distinction did not appear very relevant to actual ACE participants. ACE's community-based mode of provision was frequently said to suit the needs of women, non-English speakers, disabled individuals, older learners, indigenous people, rural residents, unemployed individuals, and early school leavers. ACE has been playing an increasing role in provision of VET to small businesspeople. (Fourteen tables/figures are included. The bibliography lists 15 references. A

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technical appendix on the human capital model and confidence intervals for the economic impact estimates are appended.) (MN)

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# Exploring the social and economic impacts of adult and community education

*Elisa-Rose Birch*

*Peter Kenyon*

*Paul Koshy*

*Nick Wills-Johnson*

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# Executive summary

This report by the Western Australia-based Institute for Research into International Competitiveness considers the social and economic impacts of the adult and community education (ACE) sector. The study is exploratory, and the measured economic impacts vary widely under different assumptions.

This study begins with a national profile of adult and community education and is followed by details of a survey undertaken of ACE providers and students. The survey is used to consider qualitative impacts of adult and community education and to estimate its economic impacts.

Complementing other sectors of education, contributing to lifelong learning, and with the potential for students to bridge into vocational education and training (VET) and higher education, the adult and community education sector is a significant national economic player. A defining feature of adult and community education is its primary focus on learners and their needs, but there are no uniform national definitions or reporting requirements. ACE comprises education and training provided through a 'recognised' adult and community education sector, education and training delivered through devolved community-based providers, and non-vocational programs delivered by technical and further education (TAFE) and other organisations.

The National Centre for Vocational Education Research (NCVER) estimates that the sector serves over a million students a year, of whom 478 000 were reported to the VET data collection in 2000. New South Wales and Victoria account for a disproportionate share of reported adult and community education.

About 69% of reported ACE students in 2000 were females and only 6% were aged 15–19, compared with 49% and 22% for all vocational education and training students. Reported adult and community education students are divided fairly evenly between the more traditional 'non-VET' recreational and life skills courses, and 'VET ACE', directly vocational adult and community education courses which have become more common in recent years. The bulk (84%) of all adult and community education training hours were college- or campus-based. New South Wales and Victoria could be said to fund a widely recognised, *sectoral* form of ACE; South Australia and the Australian Capital Territory fund a devolved adult and community education *provider* network; while other states and territories fund non-VET *programs* delivered by TAFE and VET *programs* delivered by other organisations.

The Institute for Research into International Competitiveness piloted and conducted a survey of adult and community education providers (about 300 respondents, mainly larger providers) and students (about 400 responses) in 2001. Only about 18% of the student respondents were primarily vocational, but in other respects they were fairly representative of the national adult and community education student profile.

Difficult as such things are to quantify, the provider and student surveys attest to the community and regional development role of adult and community education. ACE providers have strong links into their immediate communities and provide many life skills for community development.

Particularly where people undertake recreational courses, adult and community education strengthens community bonds. In addition the sector's providers maintain a substantial component of volunteer labour that makes a substantial contribution to local communities.

Related to its community development role is the role the ACE sector plays in regional development. Half of the providers who responded to the survey were located in rural and regional Australia. Many would be the only post-compulsory education provider in a town, or even a region. Their role is intensified when, for example, a town loses a major employer. For the town to readjust and survive, the displaced resident workers will need to learn new skills.

The surveys and extra focus groups also highlight the benefits accruing to disadvantaged and special groups in the community who might not otherwise participate in learning or may have had negative educational experiences. Such groups include the long-term unemployed, people with disabilities, migrants and elderly people.

Adult and community education courses help long-term unemployed people to stay mentally active, build their skills and enable them to keep in touch with the local community. For people with disabilities, opportunities to participate and to learn in a formal setting are not always practicable, and the ACE sector offers an alternative. In the form of 'universities of the third age', adult and community education gives older people an outlet to learn—and also to teach—the social interaction thus enhancing their wellbeing.

For students from non-English-speaking backgrounds and Indigenous students, adult and community education was found to harness their teachers and community leaders, offering life and business skills to marginalised groups. Improvement of English skills through adult and community education enables migrants to interact and integrate more satisfyingly with the local community.

However, the national statistical profile indicates that some of these groups are currently under-represented in adult and community education. A challenge remains therefore to strengthen the links between ACE providers and VET providers in such a way that upholds the strengths of adult and community education, those of informal, localised and tutor-led delivery. The pathways need to be kept open for disadvantaged and special groups who have much to gain from the informal, non-intimidating nature of ACE.

As noted, many participants use adult and community education as a first step back into the world of organised learning.

In choosing a particular provider, the students surveyed valued course availability, proximity, and being at ease. In addition to recreational, life skills, and vocational benefits, they reported gains in satisfaction, confidence and friendships.

A number of the people interviewed said that adult and community education had given them the confidence to undertake further study. Over half (53%) of the students undertaking ACE for vocational reasons had gone on to more study in the sector (1.5%), in TAFE (88%) and university (10%). A further 8% proceeded from their ACE course to work directly.

The report includes Australian Bureau of Statistics data on the benefits that accrue to individuals, in terms of wage income premiums, for various types of education. They confirm the economic benefits that individuals can gain by progressing from adult and community education to other formal learning programs.

The report makes exploratory estimates of the overall net economic impact of adult and community education, taking into account net community-wide benefits as well as the calculated net benefits to individuals.

The calculations assume that the major economic benefit of adult and community education occurs through further educational qualifications, for which the sector has provided the pathway. The estimated private benefits accrued in this way are around $2.5 billion, depending on the assumptions that are made. This underlines the importance of the ACE sector in providing educational opportunities to those who otherwise might never think about undertaking further formal education.

Overall, the report highlights the diversity and richness of adult and community education but that the challenge remains to develop more consistent reporting of ACE nationally, and better concepts and measures that can be used to explore further its social and economic benefits.

# Introduction

Adult and community education (ACE) provides significant numbers of Australians with non-vocational and vocational education and training (VET) through a variety of community organisations and training providers.

This report presents the findings of an exploratory study on the social and economic impacts of the sector.

The study consists of four main parts. The first two sections comprise a national profile of adult and community education and a description of a special survey of the sector's providers and students. In the remaining two sections, and using the results of the survey, a discussion is undertaken of the qualitative impacts of adult and community education. An analytical model to estimate its economic impacts is also applied.

The survey examines both private and public benefits which flow from investment in the ACE sector; that is, it examines the benefits accruing to individuals undertaking an adult and community education course, and those accruing to the wider community.

## Aim

The aims of this study summarised as follows are to:

- ✧ consider the profile of adult and community education, in the context of a provider and student survey
- ✧ consider the social impacts of adult and community education, including recreation and life skills benefits
- ✧ estimate the benefits and costs of adult and community education to the community
- ✧ estimate the private (vocational) benefits from completion of an adult and community education course
- ✧ make exploratory estimates of the aggregate economic impact of the sector.

## Methodology

The overall objectives of this study have been achieved by:

- ✧ analysis and review of data on the size and scope of the ACE sector, and associated references on the economic impact of education
- ✧ primary data collection through representative surveys of the sector's providers and students, such that inferences can be made about benefits and costs
- ✧ consultations with the sector and with student focus groups to validate and refine the survey results

- descriptive analysis of the qualitative impacts of adult and community education
- application of statistical inferences and the human capital model to translate individual benefits and costs (from the surveys) into estimates of aggregate economic benefits.

## Background

> More and more, then, ACE has come to be seen as a vehicle for generating social capital. The accumulation of social capital through broad participation in ACE is seen as a source of regional regeneration, working in a constructive direction against some wider economic trends … (Golding, Davies & Volkoff 2001, p.11)

A major benefit of the ACE sector for the Australian community lies in its role in improving the skills and abilities of participants in adult and community education courses, which in turn, improves the social capital of regions and communities.

Improvements in skills provide flow-on benefits to the person acquiring them and to the surrounding community. Improvements in the skills and abilities of people are additions to human capital.

Human capital can be defined as 'the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity' (OECD 1998, p.9). Empirical research shows that improvements in human capital are an important source of social and economic growth.

The adult and community education sector plays an important part in improving human capital in Australia. Just like physical capital, human capital is subject to obsolescence and depreciation over time. Many participants use adult and community education to re-invest in their human capital and to build lifelong learning.

Lifelong learning is a key to the continuous replenishment of a nation's stock of human capital. It may be defined as the process of acquiring knowledge or skills throughout life through education, training, work and general life experiences. A 'learning society' is one in which such learning is important and valued, and where people are encouraged to learn throughout their lives.

Lifelong learning comprises learning at all stages of life, not only through formal education and training, but also through participation in recreation, cultural and social activities. It is a crucial avenue enabling economies to keep pace with the rapid changes (especially in technology) associated with increasing globalisation and the growing importance of knowledge and service-based industries. Australia has now incorporated the concept of lifelong learning into public policies on education and training, including vocational education and training and all other forms of post-school education.

Broadly, there are two types of lifelong learning available through the adult and community education sector: general and non-vocational education, or personal enrichment (non-VET ACE) and VET (VET ACE). Research into the effects and impacts of VET ACE is, in one sense, easier to conceptualise, as benefits are more readily translated into quantifiable employment effects.

## Trends in adult and community education provision

Although non-VET ACE still accounts for most of the provision within the adult and community education sector, its recent evolution is marked by increasing provision of vocational education and training, and by its increasing role as a 'transition platform' into formal VET or

higher education. Golding, Davies and Volkoff (2001, p.12) summarise some of the concerns of the sector and which relate to increasing costs of delivery, the need to 'answer' more to formal educational institutions, and possible participation difficulties for key adult and community education client groups. Saunders (2001), although keen to build the links between ACE and VET providers, values the continuation of adult and community education strengths in informal, localised, and tutor-led delivery which readily accommodates the needs of students.

Despite the lack of accreditation or stated vocational intentions in many cases, non-VET ACE courses can provide an important bridge to vocational outcomes, which subsequently delivers the private and social returns to training customarily associated with vocational education and training. Supported by results from adult and community education learner surveys in three states, Volkoff, Golding and Jenkin argue that 'vocational intentions reside within individuals rather than within particular programs' and find that: '... for ACE learners, non-vocational programs not only contribute to the development of recreational and personal skills, but may also lead to unforeseen vocational outcomes' (Volkoff, Golding & Jenkin 1999, p.59).

Similarly, the New South Wales Board of Adult and Community Education (1996, p.20) holds that there is enough research evidence to demonstrate unequivocally that general adult education courses have significant vocational outcomes.

Although categorisation of adult learning experiences into non-VET or VET ACE may be convenient (or necessary) for education and training policy-makers and statisticians, such a distinction may not be relevant to actual participants. For them, learning provides a range of benefits, some of which may be vocational and some of which may be purely personal and unrelated directly to their labour market experience (for example, self-actualisation and personal satisfaction). In the current study, these benefits are termed recreation and life skills benefits.

In policy and funding terms, adult and community education may be considered as an entity distinct from school education, vocational education and training, or university education. But, as noted above, there is increasing provision of VET courses by adult and community education organisations, which attracts a proportion of Australian National Training Authority (ANTA) VET funding.

Statistics on reported adult and community education (see table 1 in the following chapter) give some credence to the common perceptions (Golding, Davies & Volkoff 2001, pp.63–4) of adult and community education as an educational enclave for educated, middle-class, city-dwellers, especially women. To some extent, the informal nature of ACE is such that statistical collections will tend to 'self-select' such participants, while undercounting or not reporting other categories.

Conversely, the sector's community-based mode of provision is often said to suit the needs of women, non-English speakers, people with disabilities, older learners, Indigenous people and rural communities, unemployed people, early school leavers, and small businesses. However, apart from women, many of these groups are considered to be currently under-represented in adult and community education.

Boughton and Durnan (cited in Golding, Davies and Volkoff 2001) suggest there is a strong argument for increased recognition of Indigenous-controlled and managed organisations as adult and community education providers in their own right. Golding, Davies and Volkoff report that, until the mid-1990s, ACE providers were important in community-based programs targeted to unemployed people (for example, SkillShare). They go on to note, however, a growing adult and community education role in addressing high youth unemployment.

In recent years, ACE has played an increasing role in the provision of VET to small business. Kinnaird and Davis (1998) suggest a six-fold increase in participation by self-employed business people between 1993 and 1996.

'In assessing what may count as under-representation, the issue is not population ratios as such but the economic and social needs of particular groups and the potential of ACE to address these needs,' note Golding, Davies and Volkoff (2001, p.9). Importantly, the customary forms of adult and community education provision are well placed to give adults in disadvantaged groups a second chance at education—providing an opportunity to enter or re-enter the education and training market and subsequently to acquire vocational skills.

In its complementary role to the other sectors of education, through its contribution to lifelong learning, and with its potential as a bridge into vocational education and training and higher education, the adult and community education sector may be a significant national economic player. However, attempts to quantify this role have been extremely limited.

# National profile of adult and community education

This chapter profiles adult and community education in Australia. It considers the nature and definition of ACE, its characteristics and scope, reported estimates of enrolments and student numbers, available provider and course data, and structures and funding.

## Nature and definition of adult and community education

The history of adult and community education in Australia goes back to the mechanics' institutes conceived by George Birkbeck in Scotland at the end of the nineteenth century. He saw these as 'liberating the mind'. Others saw them providing 'moral and mental self improvement', often with a view to employment. By the 1850s, mechanics' institutes were established in Britain and had spread to America and Australia. Australian governments supported special-purpose buildings, many of which still stand. Mechanics' institutes became established as libraries, learning places and community meeting places. Elements of that philosophy survive in adult and community education today.

One difficulty in discussing present-day adult and community education is the lack of a coherent and agreed definition. 'A defining feature of ACE provision,' note Golding, Davies and Volkoff (2001, p.5) 'is the central focus on the learners and their needs'. Following that, they identify six approaches to defining adult and community education:

- as a discrete sector, a proposition supported by the creation of adult and community education boards in some states, and one which is convenient from a funding standpoint
- as a type of organisation or provider; for example, one that is community-owned or -managed
- as a learning cause, ethos, or a set of adult or community learning principles
- as a type of course; for example, short courses, courses for personal enrichment, adult basic education
- as a type of adult educational practice; for example, one based on characteristics like informality, access, student support, flexibility of content
- as learning embedded and provided in a community context, possibly with a view to benefiting the community as well as the individual.

Borthwick et al. (2001b) compared adult and community education definitions across the states and territories. Outside the Northern Territory, ACE is at least partly defined in terms of program type. As well as the program type, New South Wales and Victoria take into consideration the type of provider, and the Australian Capital Territory includes the type of client group. South Australia uses funding sources to help define the sector's providers. The Northern Territory makes no distinction between adult and community education and vocational education and training providers and has no formal definition of adult and community education. The lack of consistency in definitions, which commonly comprise several parts derived from different

sources, adds weight to the argument that adult and community education in Australia needs to be more tightly defined.

Volkoff, Golding and Jenkin (1999) highlighted the definitional problem in their study of adult and community education in Victoria, Queensland and Western Australia. They operated from the premise that: 'the ACE provider is both community owned and managed, and that it responds to the needs of a community related to its geographical location or to a more wide-ranging community defined through some common characteristic(s)'.

Adult and community education is, on occasions, identified as the fourth sector of Australian education, after schools, vocational education and training and higher education. The range of titles for providers of ACE illustrates its diversity: adult and community education college, evening college, community college or house or centre, neighbourhood house, and worker education association. In some states, ACE providers are independent arms of a TAFE institute, operating from TAFE facilities.

Definitions of ACE can be complicated by the overlap between providers of adult and community education and providers of vocational education and training. On the one hand, ACE provisions range from accredited VET to programs designed to provide a bridge to further study. On the other hand, mainstream VET providers may offer training with ACE characteristics.

Despite the statistical convention to define courses in terms of the curricular intent, there are also difficulties in distinguishing between vocational and non-vocational learning: if a course is intended to provide knowledge and skills for the workplace it is categorised as vocational. Recognising the difficulties, Borthwick et al. under the auspices of the National Centre for Vocational Education Research (NCVER) definition (of convenience) for adult and community education:

- all education and training activity whose intention is non-vocational but contributes to the personal, cultural or social development of students, and which is delivered by TAFE institutes, universities, schools, commercial, industry or other private providers which are in receipt of State/Territory or Commonwealth recurrent or specific purpose allocations for VET, and
- all education and training activity delivered by community based organisations with a focus on providing learning opportunities for adults or contributing to the recurrent vocational, personal, cultural and social development of adults

(Borthwick et al. 2001b, p.7)

Analogously, Borthwick et al. characterise adult and community education as inclusive of three associated types of education and training:

- education and training activity reported through representative bodies for ACE providers and organisations
- education and training delivered by providers or organisations considering themselves community centres
- non-vocational activity that contributes to the personal, cultural and social development of an adult

(Borthwick et al. 2001a, p.2)

# Adult and community education student and provider profile

This section reports on adult and community education enrolments and students, providers and courses, and structures and funding.

In this context it is important to recognise that there is no national standard for sector statistics and no obligation for providers to report data unless the provision attracts public VET funding—which apparently covers less than half of all adult and community education enrolments.

## Adult and community education enrolments and students

Using the broad NCVER definitions above, which cover adult learning provided through community groups, universities of the third age, local churches and other organisations, NCVER (2001a, pp.5–6) estimates that about 1.1–1.3 million people were enrolled in some form of adult and community education in 2000.

However, only 478 000 ACE enrollees were reported to the national VET data collection in 2000 (down from 497 000 in 1999) and 86% of these were in New South Wales and Victoria (NCVER 2001a, pp.9, 22). For the purposes of comparison, these two states only had 62% of all VET students at 2000 (NCVER 2001b). This discrepancy of 24% highlights the statistical problem, whereby these two states, and to a lesser extent South Australia and Tasmania, report the bulk of their adult and community education activity whereas other states do not.

In reported adult and community education for 2000, there were 260 000 (54% of total) students in non-vocational programs and 238 000 (50%) in vocational programs. (This is more than 100% because some students enrol in both kinds of program concurrently.) Referring to table 1, about 69% of all adult and community education students were females but only 6% were aged 15–19, compared with 49% and 22% for all VET students.

**Table 1: Characteristics of (reported) ACE students and all VET students, 2000**

| Characteristic[1] | ACE students (%) | All VET students (%) |
|---|---|---|
| Females | 69.5 | 49.2 |
| Young students (15–19-year olds) | 6.4 | 22.0 |
| Mature-age students (35 years and older) | 64.1 | 40.5 |
| Residing in a capital city | 61.2 | 57.4 |
| Residing in a rural/remote area | 32.7 | 34.2 |
| At secondary school | 2.7 | 8.1 |
| Post-secondary education of some kind | 45.0 | 35.3 |
| Employed, unemployed[2] | 66.4, 11.8 | 67.5, 18.7 |
| | (= 15% u/e[3] rate) | (= 21% u/e rate) |
| Not in labour force | 21.8 | 13.8 |
| **Total number of students ('000)** | **477.8** | **1749.4** |

Notes:
1. Percentages based on students who provided information on their age, sex, etc. Students for whom the relevant information was not known have been excluded.
2. Employment status in adult and community education is to be interpreted with caution, as data are unknown for nearly half of reported students.
3. Unemployment rate.

Source: NCVER 2001a, table 3, p.9, also tables 8 and 9, p.15

The proportions of capital city dwellers and persons with post-secondary education are slightly higher in adult and community education than in vocational education and training.

The sex and age profile of adult and community education students in VET, not surprisingly, is similar to that for module-only students in VET. About 25% of all reported adult and community education study is by modules only (NCVER 2001a, p.18).

In the vocational adult and community education programs, approximately 30% of students were enrolled in formal vocational programs with the potential to lead to a recognised qualification. Informal vocational programs, comprising non-award courses and module-only enrolments, accounted for the remaining 70%.

The national VET data collection also shows that non-vocational programs attracted 54% of all adult and community education students in 2000 but only 31% of the 21.2 million annual hours.

In vocational adult and community education in 2000, females made up two-thirds of students. Courses leading to Australian Qualifications Framework or equivalent qualifications accounted for almost two-thirds of the 14.6 million annual hours. Community providers accounted for the bulk of non-vocational adult and community education, 76% of students and 82% of annual hours. Nearly all of the rest was delivered by TAFE and other government providers.

The diversity and decentralisation of adult and community education is a strength, enabling it to provide the individualised learning sought after by people, enterprises and communities. However, a lack of consistency across the states and territories presents problems in how the sector is perceived, and may be a drawback when the sector needs co-ordination for self-promotion and in competing for resources.

## Adult and community education providers and courses

The ACE sector is diverse in that it comprises small providers in country towns running a few classes each week and large metropolitan providers offering perhaps a thousand courses a year and catering for more than 20 000 students.

**Table 2: Comparison of (reported) ACE and VET, by delivery and program types, in percentages of annual hours, 2000**

| Delivery type | Vocational ACE | Non-vocational ACE | All ACE | All VET |
|---|---|---|---|---|
| College/campus-based delivery | 78.7 | 95.2 | 83.8 | 84.4 |
| Online and remote access | 2.8 | 0.4 | 2.1 | 4.1 |
| Employment-based | 6.4 | 1.5 | 4.9 | 4.8 |
| Other | 12.1 | 2.8 | 9.2 | 6.7 |
| Total known (%) | 100.0 | 100.0 | 100.0 | 100.0 |
| Total known ('000) | 14 486.4 | 6 526.6 | 21 013.0 | 326 004.4 |
| Unknown ('000) | 141.8 | 4.0 | 145.9 | 20 135.4 |
| **Total ('000)** | **14 628.2** | **6 530.6** | **21 158.8** | **346 139.8** |

Source: NCVER 2001a, table 10, p.16

Table 2 shows that, as in vocational education and training, the bulk of adult and community education training hours are college- or campus-based: 79% in the case of VET ACE and 95% in the case of non-VET ACE. Overall, 84% of reported ACE hours were college- or campus-based in 2000, with 9% other, 5% employment-based and 2% online or remote access.

Looking at non-VET ACE, there is hardly any difference between TAFE (98% of total hours) and community providers (95% of total) in their propensity to use college- or campus-based delivery.

Even if not funded by TAFE, community providers may be able to use TAFE campus classrooms, equipment and libraries. Having gained familiarity with the campus, students are encouraged to move on to TAFE upon completion of their ACE study.

For many years, adult and community education primarily delivered courses for hobbies, and personal interest enrichment. This has changed in the past three decades. First came the introduction of adult basic education in ACE—courses designed to provide basic language and living skills to help people participate in and contribute to society. As it became apparent that students were applying adult and community education skills to employment, the sector began to offer specific vocational education and training courses, creating 'VET ACE'. This offers an attractive combination of vocational learning in a comparatively informal and friendly environment.

The extension of adult and community education to include vocational education and training has been beneficial to those who lack the confidence to launch straight into formal VET, perhaps because of their time away from study or unhappy learning experiences in the past.

**Table 3: Comparison of (reported) ACE and VET, percentages of subject enrolments, by areas of learning and program type, 2000**

| | Vocational ACE programs | Non-vocational ACE programs | All ACE | All VET |
|---|---|---|---|---|
| Humanities | 8.0 | 11.1 | 9.2 | 5.4 |
| Social studies | 0.9 | 0.9 | 0.9 | 1.0 |
| Education | 4.3 | 4.7 | 4.5 | 1.9 |
| Sciences | 1.3 | 1.6 | 1.4 | 2.3 |
| Maths, computing | 21.6 | 8.4 | 16.4 | 14.9 |
| Visual and performing arts | 3.0 | 26.5 | 12.3 | 2.7 |
| Engineering, processing | 1.9 | 2.8 | 2.3 | 10.6 |
| Health sciences | 11.5 | 4.5 | 8.7 | 10.4 |
| Admin, business, economics, law | 16.7 | 3.9 | 11.6 | 20.2 |
| Built environment | 0.8 | 3.5 | 1.9 | 4.4 |
| Agriculture, renewable resources | 1.8 | 3.0 | 2.2 | 3.7 |
| Hospitality, tourism & personal services | 6.0 | 23.3 | 12.9 | 9.6 |
| Social education & employment skills | 22.4 | 5.7 | 15.8 | 12.8 |
| **Total (%)** | **100.0** | **100.0** | **100.0** | **100.0** |
| **Total ('000)** | **568.3** | **371.7** | **940.0**[1] | **12 292.7** |

Notes: 1. Number of subject enrolments reported is about twice the number of students reported in table 1.
Source: NCVER 2001a, table 15, p.20

Table 3 shows that the subject choices in reported adult and community education are diverse, and that VET ACE subject choices were similar to vocational education and training generally. The most popular choices for VET ACE and non-VET ACE in 2000 were:

- in VET ACE: social education and employment skills (22% of enrolments), maths and computing (22%), administration, business (17%) and health, community (11%)
- in non-VET ACE: visual and performing arts (27%), hospitality etc. (23%), and the humanities (11%)
- in all VET: administration, business (20%), maths, computing (15%) and social education etc. (13%).

In vocational adult and community education, about 65% of the reported annual hours were study for Australian Qualifications Framework *qualifications* or other recognised courses,

compared with 92% in all vocational education and training. Conversely, virtually all of non-VET ACE was associated with non-award courses.

## Adult and community education structures and funding

The different arrangements for funding adult and community education in the states and territories further illustrate the diversity of the sector.

Golding, Davies and Volkoff (2001) summarise the situation that existed in 2000:

> Australia splits more or less in half on the matter of State and Territory funding specifically for ACE. Four jurisdictions funded ACE in 2000. Two of these (New South Wales and Victoria) funded a widely recognised, State coordinated and supported, *sectoral* form of ACE. Essentially, it comprised a network of community-owned and managed providers organised on a regional basis. Two others, South Australia and ACT, provided funding in 2000 for ACE programs in a very devolved network of community *providers* with minimal central co-ordination. The other four State and Territory jurisdictions only funded non-VET *programs* delivered by TAFE, or approved VET *programs* delivered by registered training organisations. (Golding, Davies & Volkoff 2001, p.39)

Borthwick et al. (2001b) provide more detail on adult and community education funding arrangements by state and territory in 2001. The following summary is extracted from appendix 5, table 6 (pp.52–5), with some updates for changes since then.

### *New South Wales*

In New South Wales, the Department of Education and Training provides annual funding to the adult and community education sector through the Board of Adult and Community Education. Most funds are allocated on a formula basis, which reflects demographic differences and the needs of communities servicing disadvantaged groups.

There are about 70 providers who receive recurrent funding from the Board of Adult and Community Education for a range of programs including: general and non-accredited adult and community education, language and literacy, vocational education and training, equity initiatives, and Indigenous education strategic initiatives. Eligibility for these funds requires that the program provider be independent, community owned and managed, and not operating for profit. There are also about 30 other providers who receive small grants on a yearly basis.

The Board of Adult and Community Education also funds nine regional councils of adult and community education. The eligibility of these councils is dependent on their being non-profit associations acting for the primary purpose of supporting local adult and community education. Other sources of ACE funding include fee-for-service revenue, contracted training, sponsorships, memberships and donations.

### *Victoria*

In Victoria, funding is allocated through the Board of Adult, Community and Further Education and regional councils of adult and community education. Three types of funding are distributed: state recurrent funding for programs conducted by community-based organisations and colleges of adult education; Commonwealth growth funds for community-based organisations for delivery of access and vocational courses by colleges of adult education, Adult Multicultural Education Services and other adult and community education organisations in identified areas of priority; and ANTA adult literacy funds allocated to adult and community education organisations, Adult Multicultural Education Services and TAFE institutes. The board also manages the allocation of funds to TAFE institutes and other providers for delivery of the Department of Education, Science and Training's Advanced English for Migrants program.

Eligibility for adult and community education funding is assessed by the regional councils. To deliver accredited further education courses, organisations must be eligible to apply for government funds and must register with the regional council. To deliver accredited VET, they must register with the Learning and Employment Skills Commission.

### *Queensland*

In Queensland, most funding for adult and community education comes from the Department of Employment and Training (formerly the Department of Employment, Training and Industrial Relations). In order to qualify for this funding, programs must be accredited. Categories of programs receiving Department of Employment and Training funding are: community literacy, ACE–VET, community employment assistance, community jobs plan and TAFE–ACE.

### *Western Australia*

The Western Australian Government provides funding for accredited programs, including bridging and entry courses for targeted groups and language and literacy courses. To obtain government funding for the provision of accredited programs, community providers must be registered. Training organisations must also be registered to obtain government funding. 'Learning Centre Links' are funded by the Department of Family and Children's Services.

### *South Australia*

In South Australia, funding for ACE is received from both the Commonwealth Government and the state government and is administered by the Adult and Community Education Council.

The funding categories were revised for 2002. Under the new system, the four categories are: general education, regional development, learning connections, and (at the discretion of the Adult and Community Education Council) flexible responsiveness.

### *Tasmania*

In Tasmania, the Office of Post Compulsory Education and Training purchases programs for adult education, adult literacy and basic education from TAFE Tasmania, through a negotiated purchase agreement. TAFE Tasmania charges fees for adult education programs. Funding for the Advanced English for Migrants program comes from the Department of Education, Science and Training.

State recurrent funding for adult and community education provision by non-government community organisations is also administered by the Equity Standards Branch of the Department of Education. Community houses, and other non-profit, non-government and community-based organisations are eligible to apply for this funding, which is allocated on the basis of submissions assessed by the Adult and Community Education Advisory Council.

### *Territories*

In the Australian Capital Territory, the major funding for the sector is through annual adult and community education grants, which are sponsored by the Adult and Community Education Advisory Council and administered by the Training and Adult Education Branch. Training providers do not have to be registered to receive grants. Adult and community education organisations also access other community development and health funding from other Australian Capital Territory government agencies.

To receive funding in the Northern Territory, adult and community education providers must be registered training organisations meeting Australian Recognition Framework arrangements.

## Implications of the survey

To paraphrase the NCVER definition, adult and community education may be defined as non-VET activity delivered by TAFE and other providers in receipt of adult and community education funding, as well as VET and non-VET activity delivered by community organisations.

Analogously, adult and community education may be considered to accommodate education and training activity reported through representative bodies, education and training delivered through community providers, and other non-vocational training for personal development. Reflecting this typology, states and territories fall into three broad funding categories, those which fund adult and community education as a 'sector', those which fund adult and community education (community) 'providers', and those which support adult and community education 'programs'.

Enrolments in adult and community education reported to the national VET collection—about 480 000 students in 2000—represent less than half of the total adult and community education population. Reported activity is divided evenly between non-VET and VET programs. ACE students are more likely to be female, older, and city-based, than their counterparts in all of vocational education and training.

In this study, providers and students surveyed were sourced in consultation with the Ministerial Council for Education, Employment and Youth Affairs. The NCVER definition of adult and community education was adopted for the purpose.

The surveys addressed some non-quantifiable benefits of adult and community education and, in the case of VET ACE only, some quantifiable or economic benefits. There are various scenarios for the estimates of economic impacts. In measuring these, the analysis is restricted to measuring actual (work) income, and projected income arising from transfers into vocational education and training or higher education.

# Survey of adult and community education

This chapter covers the survey component of the study. Two surveys were undertaken, one collecting data from adult and community education providers, and the other collecting data from adult and community education students.

As a guide to the applicability of the estimates of social and economic benefits derived in the following chapters, this chapter also compares the ACE survey profile to the national ACE profile.

## Survey methodology

### Provider survey

The provider survey was developed to capture key data elements in order to estimate certain impacts of the sector which occur through adult and community education providers. The Institute for Research into International Competitiveness developed a survey form for this purpose, which was piloted with providers. The Ministerial Council on Education, Employment, Training and Youth Affairs Adult and Community Education Taskforce also provided helpful comments on the surveys. The surveys were amended to reflect comments received by these stakeholders.

Surveying of providers commenced February 2001, with the names and addresses of providers supplied by the Ministerial Council on Education, Employment, Training and Youth Affairs Taskforce member in each state. Follow-up letters were sent in April. Only about 315 (17%) of the 1800–1900 providers surveyed responded, but this figure included most of the larger adult and community education providers. Hence, the proportion of the sector captured by the survey responses is larger than the response rate may initially suggest.

There were a number of questions in the provider survey which respondents found difficult to answer. These related to course completion, cost recovery, and the estimation of staff numbers and volunteer hours.

### Student survey

The student survey was designed to provide information about adult and community education students to assist in calculating economic benefits. In particular, information to assist in the development of the human capital model used to calculate vocational benefits was requested (see appendix A). The student survey was piloted with a selection of providers, and modified according to their comments. Due to semester time constraints, the survey was sent in March 2001.

About 20 adult and community education providers assisted by providing student names or sending the survey to their students. Because the intention of the study was to capture economic impacts, there needed to be some time lag in order for such impacts to be realised. Accordingly,

surveys were sent to students who completed their course in 1999. In total, 4000 student surveys were sent, generating a 10% response rate (400).

Six focus groups were also held to compensate for under-representation of students from non-English-speaking and Aboriginal and Torres Strait Islander backgrounds.

The 400 students surveyed represent very much less than 1% of the reported students in adult and community education. Similarly, the 18% of the survey who were primarily vocational students represents much less than 1% of reported vocational students in adult and community education.

The low response rate was partially due to the dynamics of the adult and community education student population. Many survey forms were returned to sender, indicating that 1999 addresses were no longer accurate. Where, for confidentiality reasons, providers sent out survey forms on behalf of the Institute of Research into International Competitiveness, a follow-up letter could not be sent.

Noting the low response rate and low respondent numbers, the student sample was still reasonably representative of the adult and community education student population. A certain amount of re-sampling and adjustment was necessary to cope with: firstly, TAFE students concurrently doing adult and community education who responded initially for their VET courses, not their ACE courses and secondly, non-TAFE VET students who responded for non-VET ACE courses they were undertaking, rather than for their VET ACE courses which had been the original target.

In contrast to the provider survey, questions in the student survey provided no problems. The only questions causing difficulty related to course cost information, it being difficult for students to recall or estimate in 2001, costs incurred in 1999.

## Survey analysis and data interpretation

Interpretation of the results of the survey required a three-step process.

The first step was to characterise the adult and community education providers and students in the survey, testing comparability with the sector as a whole, as a prelude to the analysis of social and economic impacts.

The second step was to examine the qualitative impacts (community and private) of adult and community education. This information is presented in the next chapter and also includes feedback from the six focus groups.

The third step, which is described in the chapter 'Estimating the economic impacts of adult and community education', comprised classifying and estimating numerically, the net economic impacts of the sector. These impacts have been divided into community-wide impacts (that is, those accruing to the community as a whole) and private impacts (that is, those accruing to individual students).

In effect, the private impacts were calculated only from those indicating primarily vocational reasons for adult and community education study; that is, 18% of the total student sample of about 400.

Further details on the assumptions and process behind the economic estimates, and the results under three different scenarios, are given in that chapter.

# Survey results

## Results of provider survey

Table 4 summarises the proportions of the different types of providers occurring in the Institute for Research into International Competitiveness sample, weighted according to the providers' responses on their student numbers and course numbers respectively.

**Table 4: The Institute for Research into International Competitiveness ACE survey 2001, categories of providers, raw and weighted percentages**

| Provider category | Raw % of the sample (raw numbers) | 'Student weighted' % of the sample[1] | 'Course number weighted' % of the sample[2] |
|---|---|---|---|
| Adult education centre | 19.20 | 20.40 | 5.20 |
| Community college | 3.70 | 21.10 | 5.70 |
| TAFE | 5.70 | 24.20 | 81.70 |
| Former SkillShare project | 2.40 | 0.25 | 0.35 |
| University of the third age | 7.10 | 1.34 | 0.34 |
| Community access or learning centre | 9.40 | 2.55 | 0.76 |
| Neighbourhood house or centre | 30.00 | 13.20 | 2.95 |
| Community health agency or aged care provider | 3.70 | 0.49 | 0.03 |
| Other[3] | 18.90 | 16.40 | 3.03 |

Notes: 1. The student weight was calculated according to providers' responses to the question on their student numbers.
2. The course number weight was calculated according to providers' responses to the question on their numbers of courses.
3. 'Other' includes libraries, churches, parents and citizens associations, university extension, workers' education associations, adult migrant education providers, and councils of social or community development.

Source: A national survey of adult and community education providers conducted by the Institute for Research into International Competitiveness in 2001

Only 5% of the survey sample indicated they were incorporated (for-profit) bodies. This underscores the largely non-profit nature of adult and community education, which depends on volunteer labour and government funding to operate effectively.

TAFE institutes, the largest organisations in the ACE sector, comprise only 6% of the providers sampled, but almost a quarter of the students and more than three-quarters of the courses offered.

Taken together, TAFE, community colleges and adult education centres accounted for two-thirds of the students and over 90% of the courses. This is reasonably comparable to the national statistics given in table 2, where 84% of all reported adult and community education delivery and 95% of all non-VET ACE delivery is campus- or college-based.

The surveyed providers were located in New South Wales (8%), Victoria (46%), Queensland (9%), Western Australia (15%), South Australia (11%), Tasmania (3%), Northern Territory (8%) and the Australian Capital Territory (with less than 1%). While these percentages are not representative of the reported distribution of adult and community education providers, or the probable actual distribution, there is no strong reason to suspect that the economic impact of a provider (or course) would vary substantially from state to state. Borthwick et al. (2001b, p.6) note that age and sex profiles of adult and community education are consistent across states, which lessens the potential of a bias in results arising from the biased provider sample.

Approximately half of the providers in the survey were from rural and regional areas, and approximately half were from urban areas.

### *Course types offered by providers*

The most common courses offered by the providers (table 5) were general or personal enrichment courses, followed by adult literacy and basic education. Almost half of the providers surveyed offer some form of vocational education and training course. This highlights the importance of some form of vocational skill as the required minimum level of educational attainment for most employment opportunities around Australia.

**Table 5: Institute for Research into International Competitiveness ACE survey 2001, percentages of providers offering various course types**

| | Yes | No | Did not answer |
|---|---|---|---|
| Adult literacy and basic education | 49.5 | 16.9 | 33.6 |
| English as a second language | 34.9 | 22.0 | 43.1 |
| Adult Year 12 qualification | 10.2 | 31.5 | 58.3 |
| Preparatory (return to work or study) | 40.7 | 15.3 | 44.0 |
| VET non-accredited | 46.8 | 13.2 | 40.0 |
| VET accredited | 41.4 | 14.2 | 44.4 |
| Personal enrichment | 78.0 | 6.1 | 15.9 |
| Other | 10.5 | 14.2 | 75.3 |

Source: A national survey of adult and community education providers conducted by the Institute for Research into International Competitiveness in 2001

The non-urban providers in the sample were more likely than the urban providers to offer adult literacy, adult Year 12, preparatory, and vocational education and training, but less likely to offer English as a second language.

### *Providers' finances and staffing*

The TAFEs in the sample were about six times larger (in terms of revenue and expenditure) than any other type of provider.

Most of the providers received 90% of their funding from government, students generally paying less than 10% of course costs. The exceptions were universities of the third age and community colleges, where income from students outweighed income from government. The urban students (that is, their providers) received about $1092 per student from government on average, marginally lower than the $1214 average for non-urban students. For urban and rural students together, the average was $1173.

Many providers appeared to find the questions relating to staffing levels difficult to answer. For this reason, only staff numbers and volunteer hours were analysed.

TAFEs had more than twice as many staff (159) on average as community health agency or aged-care providers (67) and community colleges (65), the categories with the next largest average staffs. Other provider categories averaged 35 staff or less.

Paid staff appeared to be the norm in TAFEs and community colleges, whereas community health–aged-care providers, and community access or learning centres, appeared to be heavily reliant on volunteers.

## Results of student survey

Outside the non-VET and VET ACE context, the profile of the 400 students sampled appeared to be fairly similar to the national profile of adult and community education students in table 1.

About three-quarters of the sample were female and the average age was 45. This is comparable with the national adult and community education profile, of about 70% female and 64% aged 35 and over. The percentages employed, unemployed and not in the labour force were about 75%, 6% and 19% respectively, compared with 66%, 12% and 22% in the national profile.

Most students had undertaken some form of study before their adult and community education course, up to half having studied previously in this sector, or in vocational education and training, or in higher education. Only 16% indicated no prior study.

More than 80% of the students were born in Australia and almost all spoke English at home. About 10% reported significant and permanent disabilities, but less than 1% were of Aboriginal and Torres Strait Islander background. The next chapter reports on the supplementary focus groups for students from non-English-speaking and Aboriginal and Torres Strait Islander backgrounds.

### *Course types studied*

Using the Institute for Research into International Competitiveness's own categories, the most common course types in the sample were computing (27% of students), personal health, crafts and cooking (21%), languages (17%), business skills (13%) and trade skills (6%).

These choices may be compared with the most popular subject enrolments in the national adult and community education profile (table 3), which are maths, computing (16%); social education and employment skills (16%); hospitality, tourism and personal services (13%); visual and performing arts (12%); and administration, business, economics and law (12%).

About 95% of the courses were being undertaken on a part-time basis. About 25% lasted a month, about 40% three months, and only 7% more than a year.

Only about 18% indicated primarily vocational reasons for studying, compared with about 50% in the national adult and community education profile. About 20% were studying towards some form of qualification, which may be compared with about 30% of VET ACE students nationally who are studying programs that may lead to a qualification. Among those studying for qualifications, about 18% were studying for diplomas, 10% certificate IV, and 18% certificate I–III.

Finally, the courses were predominantly local, on average being conducted within nine kilometres of the student's home, and over 30% being conducted within five kilometres. This reinforces the local community nature of adult and community education.

### *Course perceptions and outcomes*

The survey canvassed why students undertook their course and why they chose their provider. It also enquired about their post-course destinations and outcomes.

Students mainly undertook their adult and community education course to gain knowledge or skills (over 35%) and for personal interest (about 30%). Only about 20% undertook courses primarily for work reasons—including upgrading skills for the job or trying to get a new job.

The main reasons why students chose a particular institution are detailed in figure 1. Course availability (for over 300 students) and location close to the respondent's home (over 200) are key factors. A third key reason, as confirmed in the focus groups, was that students 'felt comfortable' with a particular provider. This links to an important non-quantifiable benefit of adult and community education, its role in raising the self-esteem of students and showing them that they are able to learn and undertake further study.

'Course length' and 'lack of skills for study elsewhere' were not major reasons for choosing a particular provider. The first factor may indicate that adult and community education providers have fairly uniform requirements for course lengths and prerequisite skills. The second suggests that they succeed in being broadly inclusive of different types of students who are able to make use of their training facilities.

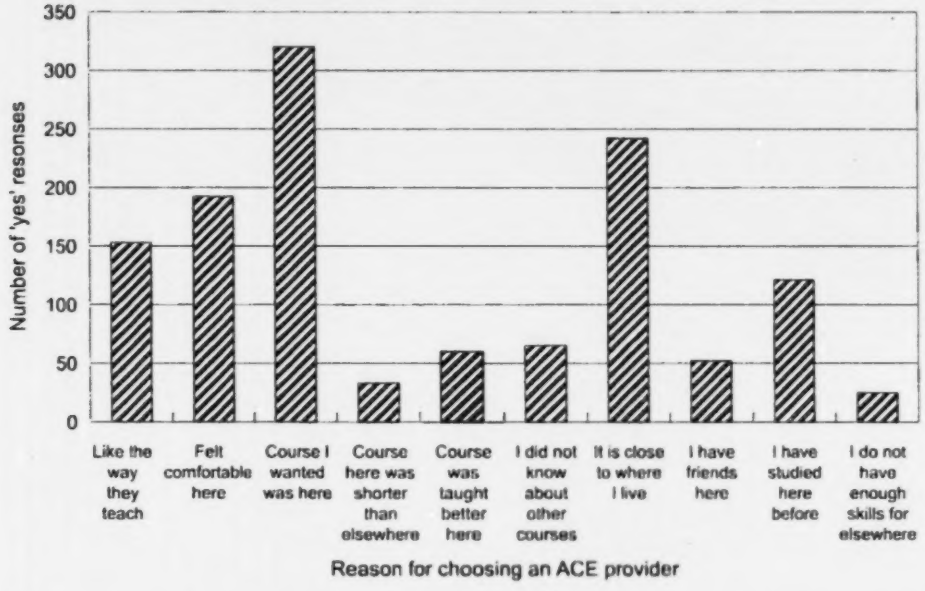
About 53% of respondents indicated that they studied another course after their adult and community education course, but only 7% used the course to move directly into further employment. Figure 2 depicts the main student destination channels after the completion of courses.

The 53% of the respondents opting for further study after the completion of their course includes many not undertaking adult and community education primarily for vocational reasons. For calculating private impacts (benefits accruing to individual students), only the responses (relating to post-ACE destinations) for the 18% of students indicating primarily vocational reasons for adult and community education study are included.

Not all students using adult and community education as a bridge to further education do so for primarily vocational reasons, but this does not negate the sector as an important bridge. A key question is whether the ACE course was a key component in the decision to undertake further study, or whether it was incidental to future study plans.

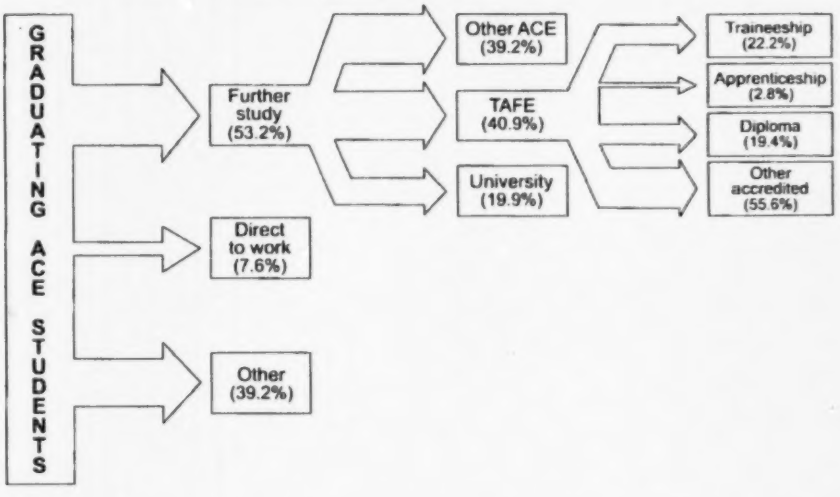
The survey asked whether students would have been able to continue to their further study without the benefit of their adult and community education courses. Over 25% would not have been able to continue to their subsequent adult and community education course without already having completed a course in this sector. The percentages were similar for those continuing into TAFE and university courses.

**Figure 1: Institute for Research into International Competitiveness ACE survey 2001, students' reasons for choosing their ACE provider**




Source: A national survey of (about 400) adult and community education students conducted by the Institute for Research into International Competitiveness in 2001

**Figure 2: Institute for Research into International Competitiveness ACE survey 2001, major student destinations after ACE course**




Note: Most students undertook adult and community education courses for non-vocational reasons, e.g. recreational, hence the high % for 'other'.

Source: A national survey of (about 400) adult and community education students conducted by the Institute for Research into International Competitiveness in 2001

# Qualitative impacts of adult and community education

This chapter deals with the qualitative, or non-quantifiable, impacts of adult and community education for communities and individuals, as implied by the ACE survey component of the study and other supporting research.

Drawing on the supplementary student focus groups, special consideration is also given here to the impacts of adult and community education on students from non-English-speaking and Aboriginal and Torres Strait Islander backgrounds.

## Qualitative community impacts of adult and community education

The adult and community education sector provides a substantial number of benefits, which cannot be quantified readily. This section discusses these benefits, and a few offsetting costs. Community benefits may arise in terms of regional impacts, development of social capital, benefits for special groups, and high marginal benefits to the community.

### Regional role of adult and community education

About half of the providers surveyed were located in rural and regional Australia. Many of these providers would be the only post-compulsory education provider in a town, or even a region. Their role is intensified when, for example, a town loses a major employer. Residents may need to learn new skills to remain in the town, and for the town itself to survive. Especially in relation to Indigenous students, the local adult and community education provider may be the only venue capable of providing new skills training.

#### Development of social capital

Related to the above is the role of adult and community education in 'generating social capital ... as a source of regional regeneration' (Golding, Davies & Volkoff 2001, p.11) in the community. Many providers are community-based, with strong links into their immediate communities. Apart from providing skills to improve employment prospects, they also provide many life skills for community development. The social nexus of adult and community education, particularly where people are undertaking recreational courses, strengthens community bonds.

The providers in the survey maintain a substantial component of volunteer labour. Thus the effort of delivering adult and community education services is underestimated by staff expenditure figures. From a narrow economic perspective, unpaid workers do not generate flow-on benefits to the economy, as they do not earn money to spend. However, from a social perspective, volunteer workers make a substantial contribution to local communities.

## Benefits for special groups in the community

The community experiences benefits from adult and community education participation by particular groups in society, especially those said to be under-represented in ACE.

Flatau, Galea and Petridis (2000) contend that the condition of long-term unemployment can impact on the mental health of the unemployed, as opportunities for mental stimulation diminish. Quite apart from the benefits gained by learning skills for employment (categorised here under private benefits), adult and community education courses help long-term unemployed people to stay mentally active.

For people with disabilities, opportunities to participate in the broader community, together with the accompanying sense of wellbeing, may be difficult to acquire. Learning in a formal setting is not always possible, and the adult and community education sector provides an alternative. ACE skills acquired by people with disabilities also benefit the broader community by bringing other sources of skilled labour into the workforce.

Improvement of English skills through adult and community education enables migrants to interact and integrate more satisfyingly with the local community. Conversely, ACE hobby and language courses give Australian students a glimpse of foreign cultures which may increase their receptiveness to migrants from these cultures. (The focus groups pursued the benefits for students from non-English-speaking backgrounds.)

Adult and community education, particularly that offered through the universities of the third+ age, gives elderly people an opportunity for learning and also for teaching, both of which assist in maintaining mental health. In addition, adult and community education provides elderly people with vital social interaction, adding to their wellbeing.

A common issue in the 'other' category of the student survey in the question relating to why people undertook adult and community education courses, was that of bridging the generation gap. Much of the knowledge necessary for full participation in today's society, and for communicating across generations, is new. Different world-views permeate the generations who have, and have not grown up with computers and the internet—the so-called 'digital divide'. Outside adult and community education, it is hard for older students to acquire the skills and knowledge to bridge the divide.

## High 'marginal' benefits from adult and community education

Adult and community education can instill fundamental skills in disadvantaged sectors of the community, sometimes enabling participation in the workforce for the first time.

An adult and community education course, or similarly a university postgraduate course, may add a few hundred dollars to a student's weekly income. However, if the student is from a disadvantaged background, this may be the difference between social security and a wage income, whereas the postgraduate student may be adding to an existing income. The value is far greater for the ACE student, even though the same aggregate increases in income prevail. Hence, the marginal benefit of each extra dollar earned by those learning fundamental skills through adult and community education is likely to be higher than for those undertaking more advanced training.

### Qualitative community costs

Adult and community education community costs which are not counted in some part of the ACE 'system' may be said to detract from community benefits. While such unmeasured costs may not be regarded as substantial in the scheme of things, they should be noted.

Strictly speaking, costing exercises should include the opportunity cost of the capital employed in the given activity, let us say at 7–8% of the capital stock employed. Low rent and lack of capital accounting in this sector may reflect implicit government subsidies. Where premises and capital are given at a discount, operational expenses may be underestimated. The Institute for Research into International Competitiveness provider survey did not canvass the rent issue, and this could be considered in future research.

The adult and community education sector benefits substantially from volunteer labour; however, it therefore follows that such labour is not available for productive work elsewhere in the economy. This could be counted as a direct cost (giving up paid work) or indirect (not entering the workforce). However, any such costs are likely to be minimal. If people volunteer for adult and community education rather than for fully paid employment, then in some sense they receive more value from the former than the latter. If so, it is doubtful that the wider community suffers a non-benefit through this choice.

However, it may be the case that an employer is allowing an employee to undertake training without loss of income. Borland et al. (2000) refer to this as 'displacement costs'. If the employee is learning skills useful to the employer, this represents an investment, not a cost. However, in some cases, 'stickiness' in wages (perhaps through workplace agreements or administrative inflexibilities) may induce an employer to continue paying the same wage, despite reduced working hours through adult and community education attendance. The student survey does not address this, but the efficiency of the Australian wages system is such that any such 'stickiness' downwards in wages is probably only a minor cost.

## Qualitative private impacts of adult and community education

This section addresses private adult and community education benefits and costs, reporting outcomes from a question in the student survey on 'associated benefits'.

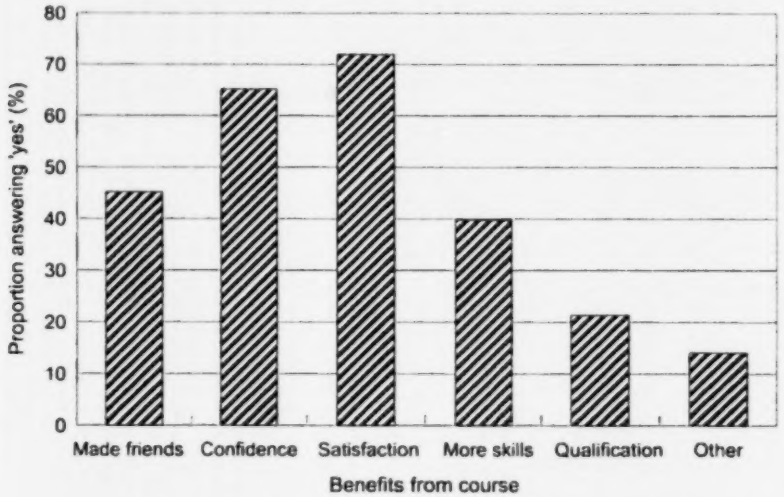
Many students use adult and community education as a first step back into the world of formal learning. A number of survey respondents and focus group participants commented that adult and community education gave them the confidence to undertake further study. For others, the sense of achievement from successful completion of an ACE course was a major benefit.

In addition to vocational, recreational and life skills benefits, the student survey explicitly addressed associated benefits possibly flowing from ACE course completion. The two most important benefits (figure 3) turned out to be satisfaction and confidence. The former reflects the fact that many students undertake adult and community education courses with recreational motives. That many respondents noted increased confidence as a benefit of their course is perhaps more interesting. Many ACE students undertaking adult and community education are adults re-entering education after a long absence. If their school learning is not a pleasant memory, adult and community education courses can boost confidence for further learning.

Making friends was also an important benefit. This reflects the sector's role in the social network. Those responding that the course provided them with skills were not necessarily referring purely to employment-related skills. Respondents noted that their course had helped to bridge the

digital divide, or given them knowledge of the (computing) skills of younger generations. Thus, 'skills' could be interpreted broadly to include better communication between the generations. A number of respondents listed other life skills—managing relationships, time management and stress relief—as benefits accruing from an ACE course.

**Figure 3: Institute for Research into International Competitiveness ACE survey 2001, students' associated course benefits**




Source: A national survey of (about 400) adult and community education students conducted by the Institute for Research into International Competitiveness in 2001

## Qualitative private costs

As argued above, if people choose to undertake adult and community education over some other activity, then they must view it as a good use of their leisure time. Private costs arising from participation are likely to be minimal.

Very few survey respondents indicated a loss in earnings resulting from participation in adult and community education, probably because courses commonly operate outside working hours.

However, a private cost from adult and community education (whether VET or non-VET) may arise if the student fails to obtain the desired outcome. While the survey did not specifically probe this issue, scarcely any of the survey respondents who undertook VET ACE expressed course dissatisfaction, or failed to go on to further study or improved employment. This suggests that 'dead weight' personal losses from failed training investments in adult and community education were minimal.

# Qualitative impacts of adult and community education on special groups

To compensate for survey under-representation, special adult and community education student groups were convened in Bowen and Townsville (Qld), Sydney and Wollongong (NSW), and Perth and Albany (WA). Of the 41 students involved, 58% (23%) were born overseas (did not speak English at home) and 35% were of Aboriginal and Torres Strait Islander descent.

## Students from non-English-speaking backgrounds

Often, the older students from non-English-speaking backgrounds had come to Australia much earlier in their lives as migrants, their immediate family needs at the time precluding formal study. For more than one, adult and community education was their first formal education.

Skills in writing, reading and speaking English boosted the independence, confidence, and self-pride of the students. For the first time, students had the ability to communicate effectively with their extended families and to do business with the wider community. Everyday interactions with English-speaking officialdom and everyday negotiation of the English-signed environment became much easier.

For the younger students, the adult and community education courses were a stepping-stone to employment. Some migrant students had professional skills from their home country, but lacked sufficient English skills to gain suitable employment.

These students anticipate that their English skills acquired in adult and community education courses will help them find paid work or socially useful volunteer work. They cited lower costs, informality, and community linkages, as reasons for preferring ACE to TAFE.

Both older and younger students had developed strong friendships within the group. This made it easier for them to negotiate the educational experience. They could also help each other to deal with employment problems and personal stresses. Nearly all of them held their (often volunteer) teachers in high regard, praising their commitment and willingness to 'go the extra mile' assisting with personal or financial issues not strictly lying within the educational (English language) brief.

## Aboriginal and Torres Strait Islander students

For these students, adult and community education implied a community centre, an opportunity to congregate and share experiences, as much as a place for learning new skills. In some cases, the formal training was secondary to informal class information sessions and information sharing.

These students often perceive TAFE and other institutional providers as less culturally appropriate for their needs. They may even be wary of adult and community education, unless they know people undertaking the chosen course, or have had positive feedback from a community mentor.

Once involved in a course, however, a number of students became keen proselytisers of adult and community education within their own communities, using it to promote community integration and harmony with the surrounding non-Aboriginal community.

A related aspect is the role of an ACE provider as a locus of cultural information and knowledge. A number of students said that the formal adult and community education program and the opportunity to mix with peers (particularly elders in the Aboriginal community) were helping them to regain lost cultural contacts.

Where adult and community education is providing some form of qualification, vocational or otherwise, students indicated that their self-esteem and confidence has been raised. In many cases, the boost in confidence (for employment) was as important as the formal skills. One group of Aboriginal women said that adult and community education had formalised and legitimised their (extant) business knowledge and business plans. This gave them greater legitimacy in the workforce, as well as providing a stepping-stone to further education at TAFE or university.

A common point of discussion was the importance of having a single person in the community to establish the course, to encourage people to attend, and to ensure the benefits of the course

were experienced by the wider community. Without such a key figure, it appeared that funding alone would not deliver the benefits of adult and community education to Aboriginal and Torres Strait Islander communities.

Some towns have only one ACE provider concerned with provision for Indigenous students (although all providers interviewed encouraged members of the white community to participate as well). This is important, not so much because Indigenous students have learning needs vastly different from others, but because their sense of community ownership then encourages participation. The sole adult and community education provider can be particularly valuable when Indigenous students need to raise their skills for job mobility or to compensate for company closures in small towns.

## Commonalities

Although the two groups discussed above are distinct sub-populations of adult and community education students, it is possible to identify a degree of commonality in their experiences. Both groups tend to be somewhat marginalised within the Australian community, and the sense of community that adult and community education lends is an important part of their study experience.

Both groups may require more fundamental education than perhaps is offered in other settings, particularly in language skills. Where they may have had previous negative educational experiences, the teacher and other key figures play very important roles instructionally and in developing confidence and self-esteem.

In a more general sense, both groups share with other adult and community education students similar benefits from their ACE education, including better employment prospects, new skills and improved self-confidence. However, given their generally lower socioeconomic starting points, the marginal benefits provided by an adult and community education are likely to be greater in both groups than for other students. The value to them of the sector as a resource is difficult to appreciate solely from an examination of quantitative data.

# Estimating the economic impacts of adult and community education

This chapter makes exploratory and tentative estimates of the economic impact of adult and community education, through community impacts, and private impacts (benefits accruing to individual students).

The first section describes the overall approach to assessing impacts, the individual elements of each of the impacts, and why they are included and how they are calculated.

The second section comprises the results of the analysis, including the assumptions used to obtain the results. Here, the production of a single estimate may be affected by the specification of the assumptions, rather than being truly reflective of the underlying impacts. For this reason, a range of three estimates is produced, according to 'most likely', 'lower bound' and 'upper bound' adult and community education scenarios.

## Process for estimating economic impacts of adult and community education

For the purposes of the estimation, it is taken that there are essentially two distinct types of impacts associated with the adult and community education sector—community and private.

Community impacts are defined as being those associated with the community as a whole, and not those accruing only to individuals undertaking adult and community education courses. Community impacts are itemised and calculated separately as community benefits and community costs, which are then summed for net community impacts.

Where students attend adult and community education courses, and receive individual benefits from so doing, these are regarded as private impacts. For example, a student attending a literacy course and learning how to read is a private impact.

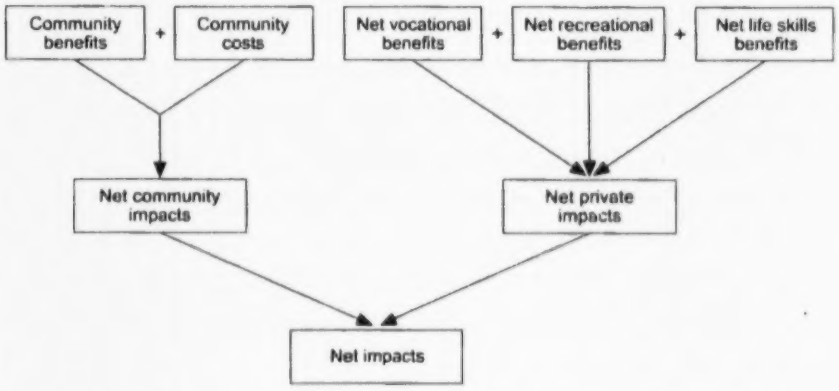
The calculation of private impacts is different. The human capital framework used (see appendix A for details) incorporates private benefits and costs into the same calculations. Private impacts are divided not according to whether they are costs or benefits, but according to their type.

In the conceptual model, at figure 4, there are three types of private impacts—net vocational benefits, net recreational benefits and net life skills benefits—which are summed to provide the net private impacts.

In practice, in relation to net recreational benefits and net life skills benefits, the consumption benefit (estimated to be around $50 million) is considered equal to the cost of provision (which is recovered through fees). The net result is zero and has no effect on the calculations.

Calculation of total impacts involves the summation of the net community impacts and net private impacts. The whole process is summarised in figure 4.

**Figure 4: Benefits and costs, in the calculation of total impacts of the adult and community education sector**




## Quantifying community impacts of adult and community education

Two approaches could be adopted. The first is to calculate the costs and benefits associated with a representative provider, multiplying by the number of providers to obtain gross benefit or cost. The second is to ascribe benefits and costs on a per-student basis and multiply by the number of students. The national adult and community education profile and the provider survey indicate that ACE providers are heterogeneous, ranging from large TAFEs with thousands of students to small community providers. It is difficult to justify the representative provider as the unit measure. Students in the adult and community education sector, in terms of the characteristics associated with the costs and benefits being calculated, are more 'homogeneous' than their providers. Therefore, the second approach has been adopted. The 'representative student' is constructed as a weighted average of all the characteristics discussed in the student survey profile (which is reasonably comparable to the national student profile). These characteristics are age, sex, nature of study (TAFE certificate or bridging course), previous educational experience, employment status during course, and employment outcomes attributed to the course.

In order to eliminate outliers, which might otherwise bias results, only results within two standard deviations of each mean were used to determine averages. Assuming attributes of students and providers are normally distributed about their means, that includes 95% of observations. Confidence intervals for each of the 'representative student' attributes are located in appendix B.

The 1999 figure of 497 000 students reported in adult and community education (NCVER 2001a, p.9) is the baseline for the 'most likely' ACE scenario. This is scaled downwards by 10% in the 'lower bound' scenario and upwards 60% for the 'upper bound'. (See table 7 for details relating to the three scenarios.) The upper bound is intended as a midway point between reported and total adult and community education.

### *Quantifying community benefits*

Because they tend to accrue to those who do not pay for them directly, community benefits are more difficult to quantify than community costs. Hence it is difficult to assign values.

For example, large numbers of people undertaking adult and community education language courses and therefore developing an appreciation for other cultures could result in a community being more receptive to migrants. Migrants do not pay for this acceptance, but enjoy its benefits. As a result, the community benefits calculated for the sector are likely to be understated.

It is possible to estimate numerically some elements of community benefits; namely, net income to adult and community education suppliers, teacher income from employment, student expenditures, and additional taxation revenues.

In the 'most likely' scenario, these elements add up to $1586m, of which $1063m is in extra tax revenues and $400m is in teacher income (see table 8, first column).

*Net income to adult and community education suppliers*

Student demand for adult and community education courses results in income for those providing each course. This contributes to gross domestic product and impacts on the economy as it is spent.

There are conceptual difficulties in including indirect effects, as providers spend the income they have earned. This is particularly the case in metropolitan areas, where a number of adult and community education providers co-exist. Hence, only the direct effects, and for that matter, only the net income (or profits) are considered. Gross income includes revenues required to pay the costs of operating an adult and community education service, which relate mostly to staff expenses. Staff expenses are calculated as a separate benefit below, and to include gross income here would result in double-counting.

The average net income per student in the provider survey is $201, or $100m in total in the 'most likely' adult and community education scenario of 497 000 students. This figure is used for the 'representative student' in the calculation of community benefits.

*Teacher income from employment*

Adult and community education employment translates into wages and salaries for ACE employees, which are then spent, thus generating an economic impact.

The first approach to quantifying this impact would be to examine the number of jobs created and then multiply by an appropriate wage, such as Australian Bureau of Statistics figures for the average teacher wages. The second approach is to factor up provider data on staff expenditures. Both sets of data were available from the provider survey.

The second approach has been preferred. It counts the total expense of employment, including on-costs. Also, the nature of adult and community education employment (volunteerism and consequent difficulty in deriving full-time equivalents) is such that staff expenses are considered to be more accurate data than employee numbers.

In the provider survey, average staff expenditure per student is $805, or $400m in total. Once again, this is attributed to the representative student in the calculations.

*Student expenditures*

In undertaking an education course, three primary student expenditures generate economic activity. These are fees, living expenses, and expenditure on course sundries (books, equipment, transport and related costs).

Fees as a 'benefit' cannot be counted here as they are incorporated above in the net income to adult and community education providers, and as part of the wages and salaries paid to staff. In the student survey, the average commuting distance is only nine kilometres. Extra 'living expenses' would be minimal, and are read as zero here.

This leaves sundries, averaging $48 per student in the student survey, or $24m in total in the 'most likely' scenario. This is likely to be an under-estimate, because students were asked in 2001 to recall incidental costs (for example, bus fares) incurred in 1999.

*Additional taxation revenues*

Government funding to the sector increases the potential for students to access adult and community education (via sector expansion or through lower student fees). Extra adult and community education skills enable extra earnings, establishing a causal link between increased government funding and increased earnings. As these increased earnings are taxed, the government receives additional taxation revenue that, other things being equal, it would not have received without the sector investment.

It is reasonable to examine *current* funding levels and estimate how much additional taxation revenue is likely to result. The calculation applies the relevant tax rate to the net present value of the income stream accruing from adult and community education, adjusted according to assumptions about how much of this potential revenue is likely to eventuate.

The section on quantifying vocational benefits explains the calculation of net vocational benefit, including private and public. Various assumptions may be made under the three scenarios about how much of the potential income (vocational benefit) linked to adult and community education is actually earned by VET ACE students (the private share), and how much accrues to government in extra tax revenues (the public share). These additional revenues are estimated at $1063m in the most likely scenario.

(For the calculation of this community benefit *only*, the computed individual benefit is in effect multiplied by 18% (the observed VET ACE proportion) of 497 000 students. In all other cases, the computed benefit or cost is multiplied by 497 000 directly.)

## *Quantifying community costs*

Adult and community education is not provided freely to the community, even when it is provided free of charge to individual students, as the community must divert resources towards its provision. The costs of the sector refer to the costs that the community bears in order that it may exist. Costs are simpler than benefits to calculate.

In the case of the adult and community education sector, there are three key cost components, government subsidies, student fees and student earnings foregone. These sum to $758m under the most likely scenario.

*Government subsidies*

Although many providers who were surveyed commented that public funding to the sector is insufficient, a substantial portion of their income is received through government subsidies. In the provider survey, almost 90% of income to most categories of providers was from these subsidies.

The average value per student of government subsidies was $1173, or $582m in total under the most likely scenario.

*Student fees*

In the provider survey, about 10% on average of providers' income was derived from student fees. The average net income per student was $201, and the average fee per student was $134, or $67m in total under the most likely scenario. Most students (apart from disadvantaged students) were required to pay some form of fee.

The student surveys also asked for information about student fees. Once outliers are removed, the difference between the average fee per student derived from the student surveys and that from the provider surveys is negligible.

*Student earnings foregone*

Firms may incur costs if adult and community education students are given paid time off work, or if they absent themselves from work. These real costs to firms and employees form part of the community cost of providing adult and community education.

The sector provides many learning opportunities outside regular working hours. Only 7% (6.7%) of student survey respondents said they had to forgo earnings to participate in adult and community education. The average loss of earnings of $3300 per student, applied to 6.7% of the student baseline figure of 496 500, results in a $110m cost under the most likely scenario.

### *Net community impacts*

Under the most likely scenario, net community impacts amount to $828m; that is, community benefits of $1586m less community costs of $758m.

## Quantifying private impacts of (vocational) adult and community education

The private benefits of adult and community education refer to benefits accruing to the individual who undertakes the course, as opposed to the wider community benefits. The increase in income a person receives when trained as a chef is a private benefit, but so is the knowledge gained at a wine appreciation course.

Personal reasons for undertaking adult and community education courses can be broadly divided into three categories: vocational reasons (improving skills to obtain a new or better job); enjoyment or personal fulfilment reasons; and to improve life skills.

This gives rise to three main categories of private benefits—vocational benefits, recreational benefits and life skills benefits. As noted above, only the first category has a non-zero impact on the calculations.

### *Quantifying vocational benefits*

This section quantifies private net (vocational) benefits for the vocationally oriented (18%) of the adult and community education student sample.

This involves stratifying the sample of vocational students, calculating the income premium (or vocational benefit in wages) attaching to each student, calculating a weighted average premium to form a 'representative student' net benefit, and factoring up the representative net benefit to form a total net private benefit (after tax).

*Stratification of the VET ACE student sample*

The vocational students only (18%) were divided according to whether they went on to further study (53%) or straight into the workforce (38%). The remainder, who did not indicate outcomes of further study or improved job, were put aside.

The 53% were also divided according to whether they went on to TAFE (88%), university (10.5%) or more adult and community education study (1.5%).

*Calculation of the individual income premiums arising from adult and community education*

Calculation of the net benefit requires calculation of the value of the income premium associated with improved employment (directly), or improved employment after further study.

In all three scenarios, the individual increase in earnings is deemed to be equivalent to the income premium associated with a shift of one level above the individual's pre-ACE level of educational

attainment. (The exception is that students proceeding directly to employment, in the 'lower bound' scenario only, move up half a level.)

Table 6 defines the educational levels used and their income premiums, compared with average weekly earnings.

For example, an individual indicating his or her highest qualification as a high school certificate was assumed to move up one level to the basic vocational wage. Reading from table 6, this is taken as an increase in lifetime income of 0.77/0.55 (35%) per annum, applying up to the retirement age of 65.

In the 'most likely' scenario, income in the future is discounted at 5% per annum compared with income now. (The discount rate is 7% in the 'lower bound' scenario and 3% in the 'upper bound'.) In any case, the present value of an income premium in a given year is the income premium (in this example, 35%) multiplied by the applicable discount rate raised to the power of that year.

**Table 6: Earnings relativities, by educational attainment, compared with average weekly earnings, 1997**

| Category of educational attainment | Income relativity, compared with average weekly earnings |
|---|---|
| Bachelor degree | 1.18 |
| Associate diploma | 1.13 |
| Average weekly earnings | 1.00 |
| Skilled vocational | 0.94 |
| Basic vocational | 0.77 |
| High school (no further education) | 0.57 |

Source: Australian Bureau of Statistics (1997)

Applying the human capital model at appendix A, the sum of all of these present values taken up to retirement age is the individual's net present value, or individual gross benefit.

If the individual commences work immediately, the income stream and benefits begin at once. For students going on to further study, the process is essentially the same, except that the benefits only flow after the future study has been completed.

Because each student is a different age, and hence has a different number of years to retirement at 65, gross benefits are calculated one by one under the model and then averaged, as follows.

*Forming income premiums into a 'representative student' weighted average*

Firstly, the income premiums for students moving to further education are weighted by the relevant proportions of students moving to TAFE, university and adult and community education (88%, 10.5% and 1.5%) and by the associated quit ratios—24% for TAFE and 40% for university within six years of commencement (NCVER 1999). The premiums are further weighted to reflect only the contribution to further earnings ascribed to the adult and community education sector, which is reckoned to be 30% in the 'most likely' scenario, or 20% (40%) in the lower (upper) bound scenario.

Hence, a weighted average net benefit is formed for vocational students moving on to further education.

Secondly, the income premiums for students moving straight into employment were averaged.

The two averages were combined according to the proportions of each type in the VET ACE sub-sample (53% and 8% respectively) to form a 'representative adult and community education student' net benefit.

### *Multiplying the 'representative student' benefit into a net vocational benefit*

The private net benefit of the 'representative' adult and community education student was multiplied by the assumed total ACE population (497 000) and by the proportion (18%) in the student sample undertaking their course primarily for vocational reasons. This provides the total net benefit, gross. It should be noted here that the proportion in the sample 'undertaking a course for primarily vocational reasons' (18%) is much lower than that in the 'VET ACE' proportion (50%) in the reported adult and community education population.

### *Turning the net vocational benefit into a 'true' benefit, and private–public benefit*

Gross benefits overstate the true benefits because education is not costless. The true benefit would account for the costs of pursuing this education. Costs include all expenses associated with the initial adult and community education course, such as fees, costs of materials and earnings foregone. Where students indicate that they move on to further study, the estimated costs associated with these courses are also imputed, using findings from previous studies. These too are discounted using the same discount rate(s). Once costs are accounted for, the true net benefit is obtained, the indicator of the true gain from the investments.

Within the true net benefit, there are two components, the public net benefit and the private net benefit. The public net benefit is the portion of net income received by government through increased taxation revenues flowing from increases in earnings.

Here, it is assumed that all ('most likely' and 'upper bound' scenarios) or half ('lower bound') of the potential tax revenue increases actually accrue to government.

The private net benefit is the percentage of additional income earned retained by the students for their use. That is, it is the net present value of the addition to the after-tax income stream, which results from the completion of the adult and community education course. This is the private net (vocational) benefit after tax.

In effect, under the most likely and upper bound scenarios, students receive two-thirds of the quantified true net vocational benefit and the government realises the remaining one-third as additional tax revenues. The respective shares change to 85% and 15% in the lower bound scenario.

The private net vocational benefit can vary by 100% according to the assumptions adopted. It is $2480m in the most likely scenario, $1928m in the lower bound scenario and $4541m in the upper bound.

## Results of estimating economic impacts of adult and community education

This section summarises the actual results of the analysis undertaken according to the process described above. As the analysis involves a number of assumptions, rather than providing a single figure, a range of possible impacts, ranging from a pessimistic through to an optimistic interpretation of key assumption values, is provided.

As outlined above, the major assumptions which are given as the 'most likely', 'lower bound' and 'upper bound' scenarios, relate to:

- the total number of adult and community education enrollees
- the adult and community education contribution to higher earnings, for VET ACE students who go on to further study
- the rise in earnings, for VET ACE students who do not go on to further study
- the annual discount rate, applied to higher earnings streams in the future
- the proportion of potential additional taxation revenue, from adult and community education education, realised by government.

All other data used in the analysis come directly from the provider and student surveys.

To account for possible errors arising from these surveys, appendix B provides confidence intervals for the point estimates of community and private impacts under each of the three scenarios.

## Assumptions for the scenarios

Table 7 summarises the key assumptions made under the three scenarios, most likely, lower bound (pessimistic) and upper bound (optimistic). The reasoning behind the various assumptions follows.

As noted earlier, the 'most likely' figure for student numbers is taken as the 1999 NCVER figure of 497 000. The lower bound of minus 10% is essentially arbitrary. The upper bound of plus 60% is in the nature of a 'halfway house' between the reported adult and community education figure and the estimated total ACE population, both reported and unreported.

An examination of longitudinal surveys of Australian youth by Marks and Fleming (1998) provides the baselines for attributing higher education impacts to adult and community education. This estimates that, relative to compulsory education, Year 12 adds 4–6% to income, a degree adds 23–28%, apprenticeship (in some cohorts) adds 11–16%, and 'other' education adds 4–7% (for women).

Adapting this work, the adult and community education income premium is assumed here to be about 5%, similar to that for Year 12 or 'other'. Imagine that an individual progresses from adult and community education and then through university, then the ACE impact might be about 5% (one-fifth) of the 23–28% gain. Or, if an individual undertakes adult and community education and subsequently an apprenticeship, then the ACE impact might be about 5% (one-fifth to one-half) of the 11–16% gain.

Hence, it would appear reasonable to ascribe about 20–50%, of the post-higher education benefits following adult and community education, to ACE itself. In the most likely scenario, 30% is used, minus or plus 10% in the lower and upper bound scenarios.

The baseline assumption that adult and community education students proceeding directly to work go 'up one level' in the Australian Bureau of Statistics table of educational attainment–vs–income is one of convenience. There is no reason not to apply this equally to the upper bound scenario. The assumption is a little harder to defend in the lower bound scenario. Hence it is taken that the students proceeding directly to work only go 'up half a level'.

The discount rate on future earnings is 5% in the most likely scenario, aligning with similar rates cited in Borland et al. (2000). This rises to 7% in the lower bound scenario, assuming in this case, that the adult and community education students move to a shorter-term investment horizon,

and falls to 3% in the upper bound, assuming here that the students take on a somewhat longer-term investment horizon.

Some increased taxation revenues might occur anyway through adult and community education students' earning more income through skills learned elsewhere. Exogenous changes (for example, in the income tax rate) may also alter results. There being no robust way to account for these effects, the full taxation revenue increase is considered most reasonable for the most likely and upper bound scenarios. This assumption is open to question. Hence, under the lower bound scenario, it is taken that only 50% of the potential revenue increase is actually collected and can reasonably be attributed to adult and community education.

**Table 7: Key assumptions made under the three scenarios for estimating the economic impacts of adult and community education**

| Most likely | Lower bound | Upper bound |
|---|---|---|
| 497 000 ACE students | 447 000 (10% less) | 788 000 (60% more) |
| Proportion of impacts of higher education attributable to ACE is 30% of total higher education premium. | Proportion attributable is 20% of total premium. | Proportion attributable is 40% of total premium. |
| ACE VET students proceeding directly to work increases wages by 'one level' in table 6 (education vs income). | ACE VET students proceeding directly to work increase wages by 'half a level'. | ACE VET students proceeding directly to work increase wages by 'one level'. |
| Discount rate on students' future earnings streams is 5% per annum. | Discount rate 7%. | Discount rate 3%. |
| All potential tax revenue increases accrue to government. | Half potential revenue increases accrue to government. | All potential revenue increases accrue to government. |

## Estimated economic impacts under the scenarios

Table 8 summarises the community benefits, community costs, and net private impacts, under each of the three scenarios.

Aggregate net community benefits are $828m under the most likely scenario, $129m with the lower bound scenario and $1574m with the upper bound.

The aggregate private net vocational benefit is $2480m in the most likely scenario, $1928m in the lower bound scenario and $4541m in the upper bound.

The aggregate net economic impact is $3308m in the most likely scenario, $2057m in the lower bound scenario and $6115m in the upper bound. Reading from appendix B, we are 95% confident that the net economic impact, under any scenario, will lie between $2441m and $7856m.

Under any scenario, the private net benefits (which effectively derive from the VET ACE students only) appear more substantial numerically than community net benefits.

To some extent, this may relate to the relative difficulty of quantifying the latter compared with the former, and the particular issue that community costs are easier to quantify than community benefits (for example, the findings of this and other studies in relation to the formation of social capital in regions).

**Table 8: Estimated aggregate benefits, costs and net impacts of adult and community education under the three scenarios ($m, rounded)**

| Benefits, costs, net impacts | Results under most likely scenario ($m) | Results under lower bound scenario ($m) | Results under upper bound scenario ($m) |
|---|---|---|---|
| *Community benefits* | *1586* | *811* | 2777 |
| • Net income to ACE suppliers | 100 | 90 | 159 |
| • Teacher income from employment | 400 | 360 | 635 |
| • Student expenditures | 24 | 21 | 37 |
| • Additional taxation revenues | 1063 | 340 | 1946 |
| *Community costs* | *758* | *683* | *1204* |
| • Government subsidies | 582 | 524 | 924 |
| • Student fees | 67 | 60 | 106 |
| • Student earnings foregone | 110 | 99 | 174 |
| **Net community impacts (benefits)**[1] | **+ 828** | **+ 129** | **+ 1574** |
| **Private net vocational impacts (benefits)**[2] | **+ 2480** | **+ 1928** | **+ 4541** |
| **Net economic impacts (benefits)**[3] | **+ 3308** | **+ 2057** | **+ 6115** |
| 95% confidence interval[4] | 2441–4174 | 1451–2664 | 4374–7856 |

Notes: 1. Total of community benefits less total of community costs.
2. See appendix A for the human capital model underlying the calculations.
3. Net community impacts plus private net vocational benefits.
4. See appendix B for explanation and details of the confidence intervals.

Sources: Individual costs and benefits are as derived from the Institute for Research into International Competitiveness surveys of ACE providers and ACE students (2001), as explained in text. Aggregate costs and benefits assume 497 000 ACE students, including 18 % (88 000) ACE vocational students. The varying assumptions for the three scenarios are as explained in text.

# Conclusions

The Australian adult and community education sector improves the social capital of regions and communities, promotes lifelong learning, and raises the life skills and work skills of individuals. A broad defining feature of the sector is its primary focus on learners and their needs.

This study considers the nature and profile of the sector itself, discusses the social benefits of adult and community education, and uses a human capital model to develop estimates of the community and private economic impacts of adult and community education.

Definitional and statistical problems relating to adult and community education are acknowledged. To capture the range of provision (funded) in the states and territories, it is useful to imagine adult and community education as a combination of education and training provided through a recognised ACE sector, education and training delivered through devolved community-based providers, and non-vocational programs delivered by TAFE or other approved organisations.

It may be estimated that adult and community education serves over a million students a year, about half of whom are reported to the national VET data collection. An increasing trend is the provision of distinctly vocational and accredited training, so-called VET ACE, which now accounts for half of reported ACE. An important issue is to deal with the service and accountability issues in the trend, while maintaining the distinctive flavour and outreach of adult and community education into the wider community.

To explore the issues, a survey of ACE providers and students was conducted in 2001. TAFE, community colleges and adult education centres were the main types of provider surveyed. Qualitative and quantitative data were collected from about 400 students. These could be said to be broadly representative of the national adult and community education student profile, but VET ACE students (18% of total) were under-represented.

Course availability, proximity, and a feeling of being at ease, were key reasons for choosing a particular provider. Benefiting from adult and community education, about half of all respondents went on to another course in ACE, TAFE or higher education.

The provider and student survey responses underline the regional and community development roles of adult and community education and the high benefits for disadvantaged and special groups in the community who might not otherwise participate in learning and may have had negative educational experiences beforehand. In addition to vocational, recreational, and life skills benefits, gains in satisfaction, confidence and friendships were important to the students surveyed.

To estimate numerically the economic impacts of adult and community education, the conceptual model used is that community benefits and costs, which sum to net community impacts, are added to net (private) vocational benefits, leading to an aggregate net economic benefit. Not all of the benefits and costs could be quantified, or quantified fully here.

Quantifiable community benefits are seen to arise from income to the sector's providers, teachers' employment income, student expenditures and additional tax revenues (by far the biggest of the four factors). Quantifiable community costs take in government subsidies, student fees and earnings foregone.

Three scenarios are adopted, to give effect to median, pessimistic and optimistic assumptions about student numbers, the impacts of adult and community education on education and earnings, and the magnitude of future earnings and tax streams. Under the 'most likely' of these scenarios, estimated net community benefits exceed $800m. It is to be noted that here that community benefits are harder to calculate than community costs, which may tend to deflate the net community benefit, in relation to the net private benefit considered below.

For the calculation of community benefits and costs, with the exception of the tax benefits, survey data on income and costs are attributed to the 'representative student' and multiplied by the indicative adult and community education population, taken as 497 000 in the most likely scenario. In the calculation of extra tax revenues and of vocational benefits, the multiplier is in effect 18% (the VET ACE survey proportion only) of that population.

The quantification of vocational benefits requires the stratification of the VET ACE sub-sample according to whether they continued to further study in TAFE, university or adult and community education (59%) or went straight into the workforce (38%). Using existing Australian Bureau of Statistics data on wage premiums for education, and applying the human capital model, an individual lifetime income premium is attached to each ACE VET student surveyed.

These individual premiums are formed into a weighted average premium for the 'representative student', which is then factored up into a gross net benefit. Under varying assumptions about the potential for government to realise the extra tax implied, this gross benefit may be divided into the public net benefit, which is the same as the additional tax revenues, and the private net benefit, which is nearly $2.5bn in the most likely scenario.

Overall, a 'most likely' estimate of over $3bn is derived for the net economic impact (benefit) of adult and community education to the community. This falls to about $2bn in the pessimistic scenario and rises to $6bn in the optimistic scenario.

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# Appendix A: Technical detail on the human capital model

The economic benefits from participation in adult and community education courses can be assumed to take two forms. One is the value of current consumption and the other the investment value of skills.

The consumption benefit refers to the value the participant places on doing the course for his or her own interest. This is divided into 'recreation' and 'life-skills' benefits in the text and is simply valued at the price students are willing to pay. The investment value (vocational benefits in text) is much more difficult to quantify. As such, the technical details are shown in this appendix, not in the main report. Drawing on human capital theory, the investment value arises where the knowledge and skills ('human capital') gained from the course increase the participant's productive capacity and hence his or her future earnings.

Precisely ascertaining the investment value of adult and community education requires knowledge of how each participant's future earnings stream will differ from what it would have been without the course. Clearly, future earnings cannot actually be observed; rather, one has to draw on past experience. But, even looking in retrospect, the literature shows that it is extremely difficult to isolate, with any certainty, the impact of an intervention such as a training program on a person's later labour market experiences. Hence, it is only possible to establish very broad approximations of the likely magnitude of the investment value of adult and community education.

Measures of the increase in earnings that arise from participation in adult and community education do not currently exist. Hence, we need either to develop our own estimates or draw on 'likely' estimates from elsewhere. Further, the impact is likely to be very different across different segments of the ACE participant population, and hence differential estimates must be applied to the relevant sub-populations. First, we do not include persons taking 'non-vocational' courses as contributing to the investment impact of adult and community education, and hence for this group only the consumption value contribution is counted. We further differentiate between persons according to their status at the time of undertaking the course in terms of the following activities:

- sub-population 1: employed
- sub-population 2: unemployed or seeking to re-enter the labour force (not working but actively looking for work or wanting to commence looking for work)
- sub-population 3: not in the labour force (neither working nor looking for work).

Participation in adult and community education may increase future earnings through either or both of the following potential impacts:

- by increasing the likelihood that a person will undertake further education and training, which would in turn enhance future earnings
- by increasing the wage earned while working, or the chance to obtain a job where a person is unemployed.

The adult and community education sector's role as a stepping-stone to further education is the most important investment component. We apply the following methodology for estimating the present dollar value of the two impacts.

## Persons who go on to further education as a result of their participation in adult and community education

For these people, the impact of adult and community education is the effect of that further qualification on their future increase in earnings. This is calculated as:

$$\Pi = \sum_{Qual=1}^{3} \left\{ (1 - Quit_q) \times P_q \times \sum_{i=1}^{n} \left\{ \sum_{t=L_q}^{t=65-age_i-L_q} \left[ \Delta E_q \times AWE \times (1+r)^{-t} \right] - \sum_{t=1}^{t=L_q} \left[ AWE \times (1+r)^{-t} \right] - Cost_q \right\} \right\}$$

In the equation above we identify the impacts separately for three different levels of qualification. These are 'qual' (or subscript q) equal to basic vocational (1), skilled vocational (2) or tertiary degree or higher (3). To explain the remainder of the equation, consider those who go on from adult and community education to a tertiary education. The second summation sign that appears indicates that we are summing across the n individuals (i=1 to n) who go on to tertiary education, and within that summation there are three elements. The first is the stream of increased earnings attributable to the higher qualification:

$$\sum_{t=L_q}^{t=65-age_i-L_q} \left[ \Delta E_q \times AWE \times (1+r)^{-t} \right]$$

In each year of their following working career, there is an estimated earnings premium ($\Delta E_q$) associated with that qualification—in this case the percentage increase associated with holding a degree, which is taken from existing studies. To arrive at a dollar estimate of the value of this premium, this is multiplied by average weekly earnings, and it is discounted at rate r each year. Discounting is necessary so that dollar earnings that occur at different dates can be compared with one another. The earnings stream begins from $t=L_q$ years into future, where L is the typical length to complete qualification q, in this case three years for a tertiary degree, and the earnings stream is assumed to continue to age 65 (that is, 65 less current age of individual i less the time taken to complete the further qualification).

From this future earnings gain, we must deduct the cost of undertaking a degree ($Cost_q$) (taken from existing published data [EPD]) and the foregone earnings, valued at average weekly earnings, for the duration of time in study. Foregone earnings, are given by:

$$\sum_{t=1}^{t=L_q} \left[ AWE \times (1+r)^{-t} \right]$$

To get the total for each qualification level, this earnings stream is then deducted by the dropout rate for that level of study [EPD] and the labour market participation rate for persons with that level of qualification [EPD]. We are therefore assuming no increased earnings effect for those who drop out of their studies before completion and for those not participating in the labour force.

We use the age profiles from survey data. The only missing information is the actual number of persons who go on to each of the three levels of further study. This we take from the results of the survey. A 'high' estimate would be used to estimate the total proportion of adult and community education participants who go on to further study, a more conservative estimate would be to use only those who indicated in the survey that the course led them to go on to further study. The survey proportions are applied to the known adult and community education population to get the total impact.

## Persons who were working at the time of undertaking adult and community education (and do not go on to further education)

Here we apply best estimates of the earnings premium that arises from doing short vocational courses, where we assume that people move up one level (for example, from high school to TAFE graduate earnings). We either apply those estimates, or else continue forward a one-off increase for the reminder of the earnings stream that is:

$$\Pi = \sum_{t=1}^{t=65-age_i} \left[ \Delta E \times AWE \times (1+r)^{-t} \right]$$

As an upper bound, we apply this to the population of persons who were employed at the time of undertaking the course, determined by the proportion estimated in the survey sample. To provide some qualitative validation, we also ask persons whether or not completing the course contributed to their gaining a promotion or better job, or to gaining a pay rise (the survey does not attempt to quantify the amount of the pay rise).

# Appendix B: Confidence intervals for the estimates of economic impacts

Tables 9 and 10 outline the confidence intervals associated with the various parameters, estimated from survey results, for the community benefits and costs and private benefits. Confidence intervals (CI) are calculated for the 95% and 99% levels of confidence, according to the following formulae:

95% CI: $s - 1.96S_s \leq \mu \leq s + 1.96S_s$

99% CI: $s - 2.575S_s \leq \mu \leq s + 2.575S_s$

Where: $s$ = the sample mean of the variable

$S_s$ = the sample standard error of the variable

$\mu$ = the population mean

1.96 and 2.575 represent the relevant Z scores for the standardised normal distribution for the 95% and 99% confidence intervals respectively.

Results are presented for the individual 'representative student' results, and have also been multiplied by the population figures for each scenario to provide an indication of how these confidence intervals would affect the results for each of the scenarios. The results are summarised overleaf in tables 9 and 10. In table 9, except for the 'vocational benefits' row, the figures are repeated in each of the scenarios. This is because, for these costs and benefits, changes between scenarios occurred only in the numbers of students. As such, differences only occur in table 10, where the aggregate implications are highlighted.

By way of interpretation, the confidence interval refers to the level of surety, imposed by the data, that the true result is between the upper and lower bounds presented. Thus, in the case of individual representative student benefits in the most likely scenario, we are 95% certain that the true result for income to adult and community education suppliers lies between $78 and $325 per student. In the case of aggregate results, we are (for example) 99% certain that the true total value of earnings foregone in the most likely scenario is between $28 382 000 and $190 716 000.

**Table 9: 95% and 99% confidence intervals for estimates of individual 'representative student' adult and community education benefits and costs**

| | Most likely scenario results | | | | Lower bound scenario results | | | | Upper bound scenario results | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 95% CI | | 99% CI | | 95% CI | | 99% CI | | 95% CI | | 99% CI | |
| | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* |
| *Community benefits* | | | | | | | | | | | | |
| Net income to ACE suppliers | 78 | 325 | 39 | 363 | 78 | 325 | 39 | 363 | 78 | 325 | 39 | 363 |
| Teacher income from employment | 610 | 1 001 | 549 | 1 062 | 610 | 1 001 | 549 | 1 062 | 610 | 1 001 | 549 | 1 062 |
| Student expenditures | 38 | 57 | 35 | 60 | 38 | 57 | 35 | 60 | 38 | 57 | 35 | 60 |
| *Community costs* | | | | | | | | | | | | |
| Government subsidies | 874 | 1 471 | 781 | 1 565 | 874 | 1 471 | 781 | 1 565 | 874 | 1 471 | 781 | 1 565 |
| Student fees | 98 | 170 | 87 | 181 | 98 | 170 | 87 | 181 | 98 | 170 | 87 | 181 |
| Student earnings foregone | 1 483 | 5 320 | 881 | 5 922 | 1 483 | 5 320 | 881 | 5 922 | 1 483 | 5 320 | 881 | 5 922 |
| **Net vocational benefits[1]** | **29 544** | **50 626** | **26 236** | **53 933** | **20 170** | **36 879** | **17 548** | **39 501** | **33 104** | **59 402** | **28 979** | **63 528** |

Note: 1. For the individual representative student, the figure presented here is the *total* net benefit, flowing to both the student as income, and to government as taxation revenue. In calculations, such as at table 10, the taxation (public) component of the net vocational benefit was deducted from the aggregate figures. For this reason, the figures presented here are termed the net vocational impacts (inclusive of public and private benefits, as defined in the text). The taxation component is approximately one-third of the total net benefit in the most likely and upper bound scenarios, and 15% in the lower bound scenario.

**Table 10: 95% and 99% confidence intervals for aggregate estimates of ACE benefits, costs and net impacts, under three scenarios**

| | Most likely scenario results ($'000) | | | | Lower bound scenario results ($'000) | | | | Upper bound scenario results ($'000) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 95% CI | | 99% CI | | 95% CI | | 99% CI | | 95% CI | | 99% CI | |
| | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* | *Lower limit $* | *Upper limit $* |
| *Community benefits* | | | | | | | | | | | | |
| Net income to ACE suppliers | 38 785 | 161 154 | 19 587 | 180 353 | 34 907 | 145 039 | 17 629 | 162 317 | 61 557 | 255 770 | 31 087 | 286 239 |
| Teacher income from employment | 303 060 | 496 764 | 272 670 | 527 154 | 272 754 | 447 088 | 245 403 | 474 439 | 480 989 | 788 420 | 432 757 | 836 652 |
| Student expenditures | 18 747 | 28 489 | 17 219 | 30 018 | 16 872 | 25 641 | 15 497 | 27 016 | 29 754 | 45 216 | 27 328 | 47 642 |
| Additional taxation revenues | 783 302 | 1 342 248 | 695 610 | 1 429 939 | 240 645 | 440 000 | 209 369 | 471 277 | 1 393 005 | 2 499 604 | 1 219 393 | 2 673 216 |
| *Community costs* | | | | | | | | | | | | |
| Government subsidies | 434 137 | 730 432 | 387 652 | 776 917 | 390 723 | 657 389 | 348 887 | 699 226 | 689 023 | 1 159 276 | 615 246 | 1 233 053 |
| Student fees | 48 666 | 84 333 | 43 071 | 89 929 | 43 800 | 75 900 | 38 764 | 80 936 | 77 239 | 133 846 | 68 358 | 142 726 |
| Student earnings foregone | 47 768 | 171 331 | 28 382 | 190 716 | 42 991 | 154 197 | 25 544 | 171 644 | 75 813 | 271 920 | 45 046 | 302 687 |
| **Net community impacts** | **613 323** | **1 042 560** | **545 981** | **1 109 902** | **87 664** | **170 282** | **74 702** | **183 243** | **1 123 230** | **2 023 967** | **981 915** | **2 165 282** |
| **Net private impacts** | **1 827 704** | **3 131 911** | **1 623 090** | **3 336 525** | **1 363 655** | **2 493 334** | **1 186 422** | **2 670 567** | **3 250 345** | **5 832 409** | **2 845 251** | **6 237 504** |
| **Net impacts** | **2 441 027** | **4 174 471** | **2 169 071** | **4 446 427** | **1 451 319** | **2 663 616** | **1 261 124** | **2 853 811** | **4 373 575** | **7 856 377** | **3 827 167** | **8 402 786** |
| Range high to low | 1 733 444 | | 2 277 357 | | 1 212 297 | | 1 592 687 | | 3 482 80- | | 4 575 619 | |

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